UTILISATION OF ANTENATAL CARE SERVICES BY WOMEN OF REPRODUCTIVE AGE (15-49), AT KIRYANGDONGO DISTRICT WESTERN UGANDA

By:

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A RESEARCH REPORT SUBMITTED TO THE FACULTY OF CLINICAL MEDICINE AND DENTISTRY IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY OF KAMPALA INTERNATIONAL UNIVERSITY

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Declaration

I, Achayo Agnes Okello, hereby do declare that this proposal is my original work and has not been presented for a ward of a Diploma or Degree in any other University. No part of this proposal may be reproduced without the prior written permission of Kampala International University.

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Approval

This is to certify that this work was done under my supervision and approval. And is now ready to be submitted to the faculty of clinical medicine and dentistry of Kampala International University in partial fulfillment of the requirement of the award of Bachelor of Medicine and Bachelor of Surgery of Kampala International University

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Sign .....Date.....30/4/2018.....

Dedication

This report is dedicated to my beloved parents, Mr. and Mrs. Nicholas G. Okello, for their enormous love for me, and for making me know that with perseverance and persistence, all things are possible. May God bless you abundantly.

Acknowledgement

With great pleasure, I would like to thank all that made this report a success.

My deepest thanks to my supervisor, Dr. Okello Bosco Otuu who worked tirelessly from the start to the end of the report. I am so grateful for your time, teaching and guidance.

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I extend my gratitude to Nwoya District Local Government for granting me the opportunity to study.

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Finally to God, The Almighty, Your amazing grace lifted me from nothing to something.

May your name be glorified forever.

List of Acronyms

LMIC	Low and Middle Income Countries.
ANC	Antenatal care.
WHO	World Health Organization.
PMTCT	Prevention of Mather to Child transmission.
TBAs	Traditional birth attendants.
ITN	Insecticide Treated Mosquitoes net.
IPTP	Intermittent Preventive Treatment Prophylaxis.
SP	Sulfadoxine Pyrimethamine.
DH	Demographic and Health Survey.
LNMP	Last normal menstrual period.
IV	Independent Variables.
DV	Dependent Variables.

Definition of Terms

Women of reproductive age; as defined by WHO refers to those between 15-49 of age, and these constitute more than one fifth of the world's population and are repeatedly exposed to the risk of pregnancy and child bearing.

Maternal health; refers to the health of the mother during pregnancy, childbirth and the postpartum period (AbouZahr C, 2004).

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Abstract

Background: In Kiryandongo district, about 38% of the mothers stay at least 5kms away from an ANC clinic with low access to general health care services. This prompted the researcher to investigate the utilization of ANC services among women staying within Kiryandongo town with the objectives: To determine the level of ANC services utilization among women (15- 49) years whether pregnant or was once pregnant and attended ANC clinic in Kiryandongo district.

Methods: A cross sectional descriptive and qualitative study was conducted in Kiryandongo town council, Kiryandongo district in western Uganda, between October 2017 and March 2018. The study used a structured self-administered question to interview 390 mothers 15 – 49 years old who attended at least one ANC services in the last years. The mothers were systematically selected.

Results: The study enrolled 390 mothers into the interviews, most of who were 25-29 years old (31.5%), the median age for the mothers were 30-34 years, and most were Protestants (28.4%). The study found that 87.6% of the mothers had attended all the ANC services in the last pregnancy, and most of them, 58.2% attended their ANC visit between 1 – 3 months of pregnancy. A chi square test of significance was conducted to determine early attendance of ANC service and the results showed that gravidity was the only significant variable (p value < 0.05) associated with early timing of ANC visits. Multiple response analysis showed that other factors associated to coming early for ANC visit was because they wanted to have a file and history of having a good previous experience in the clinic.

Conclusions: The study concluded that the utilization of the ANC services in Kiryandongo town was fairly good as most women (15-49) age group attended ANC clinics, however this was well observed in the early pregnancies as opposed to the late pregnancies. Therefore there is still need for mothers to be sensitized more about the goodness of ANC services.

Recommendations: This study recommends that: 1) the community leaders within should mobilize the local communities especially mothers of reproductive age to utilize the ANC services from a formal health center or hospital. 2) Create awareness of the increased ANC services to women of reproductive age in the Town council. And 3), another study of a similar setting with a larger scope should be undertaken to determine the factors causing late attendance

of ANC clinics among women of reproductive age at Kiryandongo Town, and follow up the complication associated to mothers attending less ANC services.

CHAPTER ONE: INTRODUCTION

1.0 General Introduction

In this chapter, the researcher has presented an overview of the study. The chapter includes the background to the study, statement of the problem, research questions, broad objective, specific objectives, justification of the study, scope of the study and operational definitions.

1.0 Background

Antenatal care (ANC) is a careful, systematic assessment and follow-up of pregnant women that includes education, counseling, screening, and treatment to assure the best possible health of the mother and her fetus (Al-Ateeq & Al-Rusaiess, 2015).

The ANC program was designed in Europe in the first decades of the 20th century and was first directed at women in socially difficult living conditions, with the objective of improving maternal and prenatal outcomes. (Al-Ateeq & Al-Rusaiess, 2015). Gradually, ANC was expanded to include more specific screening procedures to detect defined medical problems for all pregnant women. As maternal and prenatal outcomes dramatically improved in the industrialized parts of the world, ANC was given much of the credit without evidence of its exact benefit(Abalos, Chamillard, Diaz, Tuncalp, & Gülmezoglu, 2016).

The principles of ANC for women with uncomplicated pregnancies are to provide advice, education, reassurance, and support; to address and treat the minor problems of pregnancy; and to provide effective screening during the pregnancy (Hatherall et al., 2016).

The concept of quality of care is increasingly recognized as a key element in the provision of health care, and it is associated with the outcomes of care in terms of effectiveness, compliance, and continuity of care. In light of this, recent recommendations for ANC stress the need to address both the psychosocial and medical needs of women, (Al-Ateeq, Mohammed, A.; Al-Rusaiess, 2015) as well as the concept of the new ANC model, as promoted by the World Health Organization (WHO), reflects the new understanding of the role of ANC(WHO, 2016).

World Health Report 2005 calls for "realizing the Potential of Antenatal Care."9 While ANC interventions, in and of themselves, cannot be expected to have a major impact on maternal mortality, their purpose is to improve maternal and perinatal health (Lincetto, Mothebesoane-

Anoh, Gomez, & Munjanja, 2016). In addition, the potential of ANC as a line of action to increase the rate of births attended by skilled health staff, and its value as entry point for other health programs such as nutrition, is now better understood and applied (Amosu et al., 2018).

Each of the ANC visits consists of a well-defined set of activities related to three equally important general areas, namely screening for conditions likely to increase adverse outcomes, providing therapeutic interventions known to be beneficial, and educating pregnant women about planning for a safe birth, emergencies during pregnancy, and how to deal with them (Lincetto et al., 2016).

Each year an estimated 123 million women succeeds in becoming pregnant. Of these, a substantial additional number of women – around 87 million – become pregnant unintentionally (WHO 2015). 10- 30% of these pregnancies can be complicated by illnesses or medical conditions(Inui,2016).Appropriate ante-natal care services promotes safe-motherhood and delivery with improved maternal and neonatal outcome (Tuladhar & Dhakal, 2012)

WHO believes, these could be most effective if ANC is premised around the risk associated with pregnancies; which are low risk pregnancies (75%) and high risk pregnancies (25%).

Globally 839 women die every day form pregnancy related complications with at least 99% of complications in developing countries especially Sub Saharan Africa (Blencowe et al., 2016). In Uganda, maternal mortality is estimated at 435 deaths per 100,000 live births (Bbaale, 2011).

And yet WHO recommends a schedule of a minimum of four ANC visits (WHO, 2016) in which a complete ANC package can be delivered appropriately. According to this recommendation, a woman with an uncomplicated pregnancy is expected to make ANC visits; once in each of the first and second trimesters, and twice in the 3rd trimester (WHO, 2016).
Sustainable Development Goal 3 ensures, healthy lives and promotes wellbeing of all ages. It therefore aims to curb maternal mortality by 2030.

Various studies conducted worldwide and in Uganda have recognized socio-economic factors and service delivery environment as important determinants for the use of maternal health services with a special mention on the disparities of health care access (Oladipo, 2014).

In developing countries including Uganda, several factors impede accessibility, including cost of services, distance to health services, lack of available transportation, high transportation costs, poor road conditions and uneven distribution of health care facilities and lack of independence by women to make decision on matters that directly affect their health(Adedini, Odimegwu, Bamiwuye, Fadeyibi, & De Wet, 2014).

All of these factors increase travel time and the difficulty in accessing health service facilities. In rural Uganda, physical accessibility and acceptability remains a significant challenge to health care service delivery.

In Uganda, initiation of first Antenatal visit is punctuated by later start. (17%) of the mothers start their first ANC after 3 months, and yet even among those who start early, less than 50% (only 47%) do complete the recommended four sessions visit in the national maternal health guidelines (Bbaale, 2011).

Studies have shown that this is due to poor perception on the quality of ANC factored in by the mentality and behaviors of the midwives who treat women in rather crude way, making women to rest on their own strength and try to deliver from home. This is one of the causal theories which have been highlighted in most of the studies among rural women in Uganda.

The findings undermines the WHO recommendations which highlights the importance of early initiation and optimal frequency of antenatal visits in ensuring a safe motherhood and childhood(Bbaale, 2011). It also shows that early initiation of an antenatal care visit enables early screening for complications, referral, and treatment of complications identified during ANC.

1.2 Problem Statement

The WHO recommends a minimum four ANC visits to curb the challenges of maternal health by year 2030 and ensure health lives for all populations(UNDP, 2017). Yet as of 2017, everyday about 830 mothers die due to pregnancy and child birth complications with over 99% of those deaths occurring in developing countries(WHO, 2016).

Women in rural areas of Uganda are two times less likely to attend ANC visits than urban women (Kawungezi et al., 2015).

In Kiryandongo district, at least 38% of pregnant mothers live more than 5kms away from the nearest health center(UBOS, 2017), thus marked as having poor access to maternity services which is one the structural barrier to access ANC services within the district. This factor coupled with the rural setup of the district means that women in Kiryandongo district are most likely to have poor ANC attendance and thus have higher rates of peri-natal complications compared to other urban settings. This study therefore understands that there is a difference in attendance rates for ANC services as well as gaps caused by age variations. This study is to assess the antenatal clinic attendance of women (age 15-49 years) in Kiryandongo district.

1.3 Objective of the Study

1.3.1 Broad Objective

To assess the utilization of antenatal care services by women of reproductive age (15-49) living in semi-urban community within Kiryandongo district

1.3.2 Specific Objectives

1. To determine the level of ANC services utilization among pregnant women 15- 49 years within Kiryandongo
2. To determine the factors hindering the access of antenatal care services by pregnant women (age 15-49) within Kiryandongo district.
2. To determine the common perinatal care practices that occurs both at home and in health care facilities by pregnant mothers in Kiryandongo district.

1.4 Research Questions

1. What is the level of ANC services utilization among pregnant women 15- 49 years within Kiryandongo district?
2. What are the factors hindering the access of antenatal care services by pregnant women (age 15-49) within Kiryandongo district?

3. What are the common perinatal care practices that occurs both at home and in health care facilities by pregnant mothers in Kiryandongo?

1.5 Study Justification

Most women in Uganda have registered late ANC attendance, averagely at 5.5 months of pregnancy and do not complete the required four visits. The inadequate utilization of ANC is greatly contributing to persisting high rates of maternal and neonatal mortality Uganda(Kawungezi et al., 2015), and yet WHO recommends four ANC visits. The study will therefore address the four or low utilization of ANC in Kiryandongo district, and the study finding will be able to inform policy makers, service providers, and the community at large.

1.6 Scope of the Study

Content Scope: The study was designed to determine the utilization of ANC. Specifically looking at the sociodemographic characteristics of the mothers associated with ANC services utilization and their outcomes on the timing, numbers and access to ANC services.

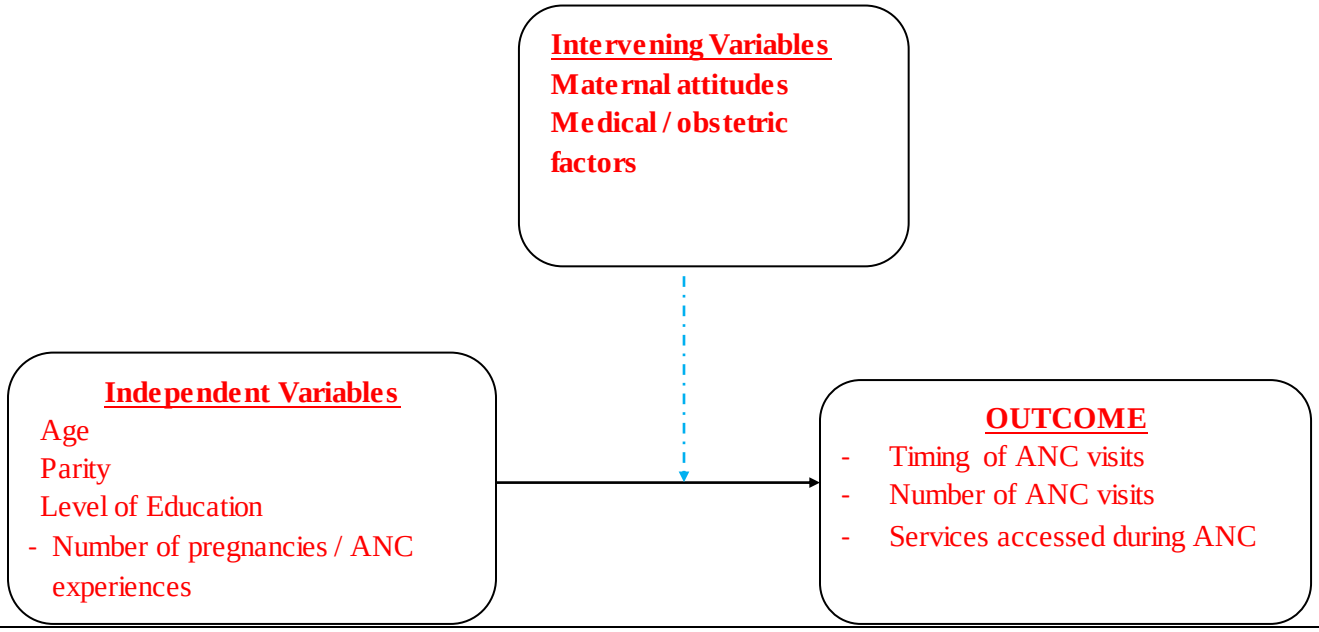
Geographical scope: The study was conducted within Kiryandongo town.

Time scope: the study was conducted between September 2017 and March 2018.

1.7 Conceptual Framework

1.7.0 Conceptual frame work

Figure 1: Conceptual framework for the study adapted from Bbaale, 2011



CHAPTER TWO: LITERATURE REVIEW

2.0 General Introductions

This chapter describes the study done by other researchers in relation to ANC services offered and factors associated with adequate and inadequate utilization of ANC services.

2.1 Attendance of ANC visits

According to WHO figures, between 2005 and 2010 only 53% of pregnant women worldwide attended the recommended four antenatal visits in low-income countries, this figure (36%) was disappointing (Finlayson & Downe, 2013a)

A recent meta-analysis of why women attend ANC conducted by Downe et al, showed that the number of women in LMICs attending at least one antenatal appointment increased from 64% in 1990 to 81% in 2009, and those attending four or more times rose from 35% to 51% over the same period(Finlayson & Downe, 2013b).

This finding revealed that there exist great disparities in ANC attendance with the residence of the mother with urban mothers reported attending more than rural mothers.

However, major disparities exist within and among continents, countries, and between urban and rural population. WHO study in Kenya showed that the discrepancies could be due to the fact that in rural settings, there is poor access to trained health workers compared to urban areas(Say & Rosalind, 2011).

Similar studies have been done in Vietnam (T. K. Tran et al., 2011) showed that the average number of visits was much lower in the rural setting (4.4) than in the urban (7.7). In the rural area, 77.2% of women had at least three visits and 69.1% attended ANC during the first trimester. And in rural Kenya (T. Tran et al., 2011) showed that despite the high prevalence of antenatal care (ANC), the proportion of women who made the recommended number of visits or who initiated the visit in the first trimester of pregnancy remains low compared to Nairobi as a whole and, more importantly, compared to rural populations. Bivariate analysis shows that household wealth, education, parity, and place of residence were closely associated with frequency and timing of ANC and with place of delivery.

Findings of those two studied confirm the notion that rural women are poor utilizers of ANC services compared to the urban colleagues.

Almost all women in developing countries have at least four antenatal care visits, are attended to by a skilled health worker during childbirth, and receive postpartum care. In contrast, only 47% of Ugandan women receive antenatal care coverage and only 42% (UNICEF, 2016) of births are attended by skilled health personnel. Among the poorest 20% of the population, the share of births attended by skill health personnel was 29% in 2005/2006 as compared to 77% among the wealthiest 20% of the population (Uganda Millennium Development Report (2012) in Wikipedia).

A study was done in 2007 in 54 districts and 553 health facilities in Uganda to determine availability of emergency obstetric care and its related maternal deaths. The study found that few of these units had running water; electricity or a functional operating theater(Nabudere, Assimwe, & Amandua, 2011). However, having these items was shown to have a protective effect on maternal deaths.

The availability of midwives had the highest protective effect, reducing the case fatality rate by 80%. This study found that while 97.2% of health facilities were expected to have emergency obstetric care services, few had provided these services. This is the most likely explanation for the high health facility-based maternal death rate of 671 per 100,000 live births in Uganda in 2007. The study concluded that addressing health system issues, particularly among human resources, and increasing access to emergency obstetric care could reduce maternal mortality(Nabudere et al., 2011).

Furthermore the regional differences in human resource distribution in Uganda have yielded maternal health disparities in the country with a bias towards the central region. In the central region, 18% of women received ANC from a medical doctor compared to 4.3%, 4.5%, and 9% of women in the eastern, northern, and western regions respectively (Bbaale, 2011).

Study in western Uganda among adolescent shows that 43% of adolescents make the WHO and UNICEF recommended four ANC visits, except for the small percentage variation (1%) and for the analysis that was based on older mothers, the findings agree with Ndyomugyenyi (1998) that estimated 42% of pregnant women in Uganda attend the required 4 ANC visits (van Eijk et al., 2006).

2.2 ANC services utilization

Studies on ANC service utilizations are varied with different results basing on some factors such as access to services as well as the strength of the system where the mothers' access services from. One study in Nigeria shows that most common services rendered to the women at the ANC clinic was weight measurement 301(98%) and the receipt of deworming tablets 197(64.2%) was the lowest(4.5)(Dairo & Owoyokun, 2010a).

The women were also given health education with the information received on diet 298(97.1%) highest, while the information received on HIV/AIDS was at 261(85.0%)(Dairo & Owoyokun, 2010b).

According to all participants, in a study in western Tanzania, PMTCT services are widely supported in the Maasai and Watemi communities. Messages about the importance of skilled birth attendance are not relayed to couples during PMTCT counseling sessions (Dairo & Owoyokun, 2010a)..

Van Eijk et al have done some of the studies on the services received by mothers and their findings showed that mothers appreciated the information and advice received at the ANC. The main topics were care during pregnancy and care for the newborn. However, few women attended a health talk (14%), and other essential topics such as place of delivery, making an individual birth plan, family planning, malaria, and HIV/AIDS prevention received little attention (Ouma et al., 2010).

In Tanzania all women were examined and received tetanus vaccination during their ANC-visits However, other preventive treatments, laboratory tests, and health education were not common, ranging from 67% for a blood pressure measurement to 3% for treatment for helminthiasis (Ouma et al., 2010).

Among the common packages related to perinatal services, the findings showed that abdominal palpation, tetanus vaccination and weight measurement were high (>90%), and were provided highly during ANC but provision of other services were low, e.g. malaria prevention (21%), iron (53%) and folate (44%) supplementation, syphilis testing (19.4%) and health talks

(14.4%). Eighty percent of women delivered outside a health facility; among these, traditional birth attendants assisted 42%, laypersons assisted 36%, while 22% received no assistance (Ouma et al., 2010).

In rural Tanzania, studies have shown that one out of 5 women received malaria prevention (21%) or underwent a syphilis test (19%), and approximately half of the women received iron (53%) and folate (44%) supplementation. Among the 80 (14%) women who received health talks during ANC visits, the two most frequent topics were care during pregnancy (recommended diet, avoiding a heavy workload, importance of regular ANC attendance and a hospital delivery), and care for the newborn (e.g. diet, breastfeeding). Family planning (mentioned by 5 women), the use of bed nets to prevent malaria and HIV prevention were infrequent health education topics (Al-Ateeq & Al-Rusaiess, 2015).

This study further showed that although antenatal care coverage in Tanzania is high, worrying gaps exist in terms of its quality and ability to prevent, diagnose or treat complications(Gross, 2012).

In Malawi, women distinguished 'blood pills' from malaria drugs, and recalled being given Insecticide Treated Mosquitoes Nets (ITNs). Women in Ghana reported having their arms 'tied', but did not explicitly link this with blood pressure measurement(Christine, Jacqueline, & Savigny, 1996). Women described being injected and tested, but specific mentions of HIV testing were only made frequently in Malawi, and references to syphilis tests and hemoglobin analysis were rare overall(Pell et al., 2013).

In Uganda, 76% of women in the central region received antenatal care from a nurse/midwife compared to 90%, 87%, and 80% of women, respectively, in the eastern, northern, and western regions. Looking at the antenatal care content, in the central region, 63% of women had their blood pressure measured compared to 47%, 50%, and 50% in the eastern, northern, and western regions respectively (Bbaale, 2011).

Additionally, 22% of mothers in the central region had their urine samples taken compared to 9%, 11%, and 9% in the eastern, northern, and western regions respectively. In the central region

40% had their blood sample taken compared to only 16%, 28%, and 28% in the eastern, northern, and western regions respectively. Also in the central region 57% received a tetanus injection at least twice compared to only 45%, 54%, and 48% in the eastern, northern, and western regions respectively.

Finally, 58% in the central region delivered with the assistance of medical personnel compared to only 40%, 27%, and 25% in the eastern, northern, and western regions respectively (Bbaale, 2011).

2.3 Socio demographic factors and ANC Utilization

Research study in Nigeria shows that age has a significant association with use of ANC. Women who were 25 years or more 245(79.0%)] were more likely to attend ANC clinic than women who were less than 25 years 62(68.9%) (Dairo & Owoyokun, 2010a). Also in the same study, it was shown that majority (76.8%) of the respondents attended ANC clinic. Women in urban areas were more than 2 times likely to attend antenatal clinic than women in rural areas. Women who were Muslims or other religions were more than 2 times likely to attend ANC clinic than women who were Christians (Dairo & Owoyokun, 2010b).

Study also shows that prime gravidae were more likely to seek advice and assistance and initiate ANC earlier. Nonetheless, these decisions were not taken alone but on the basis of advice from older women that hastened their first ANC visit. For prime gravidae, pregnancy disclosure influenced timing of ANC (Dikienoo, 2015).

Across all the study area, all types of respondent reported that adolescents and unmarried younger women hid their pregnancies and delay ANC to avoid the potential social implications of pregnancy expulsion from school, and their natal home, partner abandonment, stigmatization and gossip. In contrast, older women did not make active efforts to hide their pregnancies. However, they would only directly disclose their pregnancy to close relatives and their husband (Ouma et al., 2010).

Research showed Married women [291(78.2%)] were more likely to attend ANC clinic compared to women who were single, separated or divorced [16(57.1%)]. Educational status also showed a significant association with respondents having an education of secondary school and above 275

(82.1%) attending ANC clinic more compared to women who had an education of primary school and below32 (50.0%) (Dairo & Owoyokun, 2010a).

Besides the results of full model showed that women with higher education levels were 2.35 times more likely to receive skilled attendance at delivery in comparison with illiterate women. Older women, women having more than 3 children, belonging to schedule tribes, to be Hindu and to be married to a low educated husband were associated with lower use of skilled attendance at delivery (Jat, Ng, & San Sebastian, 2011).

In Uganda mother's education is revealed to be significant in influencing the frequency of ANC. Mothers with at least secondary education are 6–11% more likely to attain at least four visits compared to counterparts with no education at all (Bbaale, 2011).

The results showed that women from richest quintile had 4.53 times more likelihood of receiving ANC during pregnancy in comparison with women from the poorest quintile of the society. The odds of reporting use of ANC by women with higher secondary and above education were 2.57 times higher than that of illiterate women. Other predictors of the use of antenatal care were mother's age at last birth, husband's education, mother's occupation, birth order, and poverty index (Ouma et al., 2010).

2.4 Factors for ANC utilization

A study in Ghana showed that, women gave reason for attending ANC as monitoring the progress of their pregnancy or to check the position of the unborn child. Others gave reasons as to identify problems during pregnancy .In the same study in the Ashanti Region, women also highlighted the importance of taking the medicines provided during ANC to ensure the health of the pregnancy and the development of the baby(Samson, 2012).

In addition, Ghanaian respondents, particularly in the Ashanti Region, viewed ANC as a normal part of pregnancy: attending the clinic was simply what women did. In Upper East Region of Ghana ANC was often considered compulsory, a result of the authority of health staff or the vague idea of it being the 'bi law'(Pell et al., 2013).

Van Eijk et al, 2006 showed that most (87%) women decided for themselves to visit the ANC; the husband, mother or mother-in-law suggested attending the ANC for only a few (5%, 4%, and 2% respectively). Many women (67%) gave more than 1 reason to visit ANC; the reasons most frequently mentioned were: to check the position, condition or growth of the baby (83%); to detect maternal problems and to be treated when sick (55%); to get a tetanus injection (24%); and to get an ANC card (18%) (Ouma et al., 2010).

Participants expressed the belief that medical staff in health facilities treats pregnant women better if they attend with an ANC card, particularly if the card shows evidence of multiple visits. Eleven percent of the women mentioned that they appreciated the health information the ANC provided in the form of talks or posters (Ouma et al., 2010).

2.5 Factors associated with inadequate ANC utilization.

Study done in Tanzania shows TBAs and relatives are viewed by the Maasai and Watemi women of Tanzania as affordable (e.g., no transportation costs required), and able to meet their service expectations which include continual support and advice during pregnancy, delivery, and in the postpartum period, the provision of body massage throughout labour and delivery, and knowledge of a variety of delivery positions (Magoma, Requejo, Campbell, Cousens, & Filippi, 2010).

In addition majority of Maasai women perceive digital vaginal examinations performed at health units as painful, likely to damage the baby, and a cause of labor retraction. Some Watemi women described digital examinations performed by male providers as dehumanizing. In contrast, Maasai women felt that TBAs perform digital vaginal examinations gently and only when the baby's head is crowning (Magoma et al., 2010).

Maasai and Watemi participants explained that caesarean sections performed with no explanation provided in advance evoked fear in pregnant women that they will undergo unnecessary caesarean sections if they deliver in health units. Episiotomies and repairs of genital tears sustained during delivery also deter Maasai and Watemi women from seeking skilled

delivery care. Genital tears are viewed in the two communities as inevitable complications of childbirth that do not require medical intervention (Magoma et al., 2010) .

Among women (83%) delivered outside of a health facility, 80% delivered in their own house, 18% in the house of a TBA and 3% on their way to a health facility. The most frequent reason for not attending a health facility for delivery was lack of means of transport, in particular at night (49%) (Ouma et al., 2010).

Other important barriers were fast progression of labor (47%), and expense (28%). Fourteen percent of women did not think facility attendance was necessary; reasons given for this included previous uneventful home delivery, preferred home deliveries, or had made arrangements with TBAs or another person to attend the delivery (Ouma et al., 2010). A small subset (3%) reported anticipation of unpleasant treatment at a health facility as a reason not to attend. 64% of those who delivered outside a health facility were aware of the potential risks, and could identify one or more complications that would occur (Ouma et al., 2010).

Study in Nigeria shows that respondents who neither sought modern nor traditional ANC during pregnancy gave various reasons for not seeking ANC care at all. Fourteen (58.3%) gave the inability to afford cost of ANC as the reason for not obtaining antenatal care at all (Dairo & Owoyokun, 2010a). The other reasons reported by the women who did not seek ANC at all include the attitude of care givers (14.8%), the long time that will be spent in obtaining ANC 8 (29.6%), those who did not think ANC was even important 16 (59.39%), distance to venue of antenatal care 6 (22.2%), religious reasons 1 (3.7%) while others claimed they had no chance to attend 8 (29.6%) (Dairo & Owoyokun, 2010b).

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter describes the method and procedure that were used in the process of conducting this study. It includes; the study design, area of study population, sample size determination, sampling procedure, data collection procedure, management and analysis, instruments, inclusion criteria, ethical considerations, and limitations to the study.

3. 1 Study Design

The study was a cross sectional, qualitative study in nature assessing scope of ANC service utilizations, and maternal factors hindering the utilization of ANC services, by women living in the peri-urban areas of Kiryandongo town council, Kiryandongo district, western Uganda. This study design is preferably selected because it involved a systematic collection of information often under conditions of considerable control and the analysis of that information using statistical procedures and requires a low number of samples(Suresh, Suresh, & Thomas, 2012).

3.2 Study Setting

Kiryandongo is a town in the Western Region of Uganda. It is the main town, administrative, and commercial center of Kiryandongo District. Kiryandongo is on the main Gulu-Masindi highway, approximately 50 kilometers (31 mi), by road, north-east of Masindi, the largest town in the Bunyoro sub-region. This is approximately 225 kilometres (140 mi), by road, north-west of Kampala, Uganda's capital and largest city (Kiryandongo (n.d) in Wikipedia).

3.3 Study Population

The study population included all the women of reproductive age (15-49) years who were found in Kiryandongo Sub County at the time of the study. In 2014, the national population census put the population of Kiryandongo at 31,610 with about 16,121 women.

3.4 Sample Size Determination

The sample size was determined by Sloven Formula used for calculating sample size in surveys, adapted from **(Garaez, 2013),** which is given by:

$$n = \frac{N}{1 + N(e^2)}$$

Equation 1: Slovene's formula for sample size determination

Where:

N= Population Size (16,121 women in Kiryandongo Sub county)

e= Margin of Error = 0.05(5%)

So when substituted in the above formula

$$n = \frac{16{,}121}{1 + 16{,}121(0.05)^2}$$

n= 390.

3.5 Sampling Procedure

Systematic sampling technique was used to identify mothers who were involved in the study. Kiryandongo district comprises of four sub counties, (Mutunda, Kigumba, Kiryandongo and Masindi port, and three town councils, (Kiryandongo, Bweyale and Kigumba). Kiryandongo town council has two wards, northern and southern. Due to limited finance the research was focused mainly in Kiryandongo subcounty and the two wards were all considered. The 390 mothers were generated by identifying the number of households in that ward and dividing the number by the sample size required (390) to get the household number that were included in the study.

$$\left(\frac{\text{Number of Household}}{390}\right) = 3^{rd})$$

Equation 2: Cluster Sampling Formula to identify Households

.

So the 3rd number was to be selected systematically

3.6 Selection criteria

3.6.1 Inclusion Criteria

Women within the age bracket (15-49) who have ever been, currently pregnant, delivered, have either attended ANC or not and were willing to consent were chosen.

3.6.2 Exclusion Criteria

All those outside the age bracket were excluded.

All the mothers who refused to consent to the study were excluded.

Mothers who are very sick or nursing a sick child at the time of this study were also excluded.

3.7 Definition of Variables

The major variables considered in the study were dependent and independent variables. The dependent variables were, the time of antenatal visit, the number of antenatal visit and the place of delivery. The independent variables werw the socioeconomic status of the mothers, maternal literacy, Other factores such as income of the husbands, and past obstertic history as well as attitude of the mothers were used as intervening variables.

3.8 Research Instruments

A simple questionnaire consisting primarily of closed ended formatted questions including dichotomous questions (e.g. yes/no), liked rating and multiple response was used for ease of completion and analysis. All questions were categorized in 4 sections as follows.

(i) Section A: the first section contained information on the participants in terms of age, place of residence, marital status, and type of family, parity, lifestyle factors (smoking and alcohol consumption), education, occupation, income, and religion.

(ii) Section B: this section sought to understand the utilization of ANC services.

(iii) Section C: multiple response questions were mainly used in the section to determine more information on the factors influencing mothers not to attend more ANC services.

Section D: it consisted of dichotomous and multiple response questions to find out more details on the perinatal activities at home and in the hospital.

3.9 Data Collection Procedures

The primary sources was obtained by moving out to the field and picking firsthand information directly from the various respondents. This was done through observation, getting comments, and use of self-administered questionnaires that were distributed to respondents for filling. A translator was also identified to help with the interpretation of the questionnaires to the mothers so that they could understand the questions clearly and give an accurate response. The translator was given on the job training for two days to ensure he/ she had an understanding of the ethics and etiquettes in interviewing respondents and managing personal information gathered through an interview process.

3.10 Data Management.

Raw data were sorted, coded and entered in the computer using Epi Data 3.1 data editor for data cleaning, to check for missing values, out layers and logic errors before analysis. Then sorted data were changed into BMI version 18 of SPSS and Stata Special Edition (TX) using the listing method, descriptive statistics were used to analyze variables. Analyzed data were displayed in form of Charts, graphs and frequency distribution tables, which then formed the basis for interpretation, discussion and conclusion.

3.11 Ethical Considerations

- First, an approval was sought from the faculty of Clinical Medicine and Dentistry of Kampala International University for permission to conduct the study. Also letters of introduction was obtained from the faculty to introduce the researcher to local leaders who then in turn granted permission to conduct the study in the selected division:
- Informed consent was obtained from respondents before they were interviewed.
- Privacy and confidentiality for information provided by the respondents was assured. Besides, the information gathered were used only for the purpose for which it gathered.
- The autonomy and right of participants to refuse to consent or give any information they felt uncomfortable were guaranteed.

- Participants' safety was assured, and disclosure of respondents' identity was avoided to minimize the risk of volunteering information for the study.

3.1 2 Limitations of the study

- The content of the study in terms of its scope was very big given the small time interval for the study as well as the financial constraints.

CHAPTER FOUR: STUDY FINDINGS

4.0 General Introductions

In this chapter, the researcher has presented the results of the study according to the specific objectives of the study. Results are here presented in the form of tables, graphs and charts.

4.1 Study Findings

4.1.1 Demographic Characteristics

Table 1: Age Group of Respondents

		Frequency	Percent	Cumulative Percent
Age Category	20-24	78	20.0	20.0
	25-29	122	31.3	51.3
	30-34	90	23.1	74.4
	35-39	41	10.5	84.9
	40-44	31	7.9	92.8
	45-49	28	7.2	100.0
	Total	390	100.0	

Table 1: Above showed that most of the mothers who participated in this study were 25 – 29 years old age groups, 122(31.3%) followed by the 30-34 (23.1%) and the least were mother of the age group 45-49,28 (7.2%).

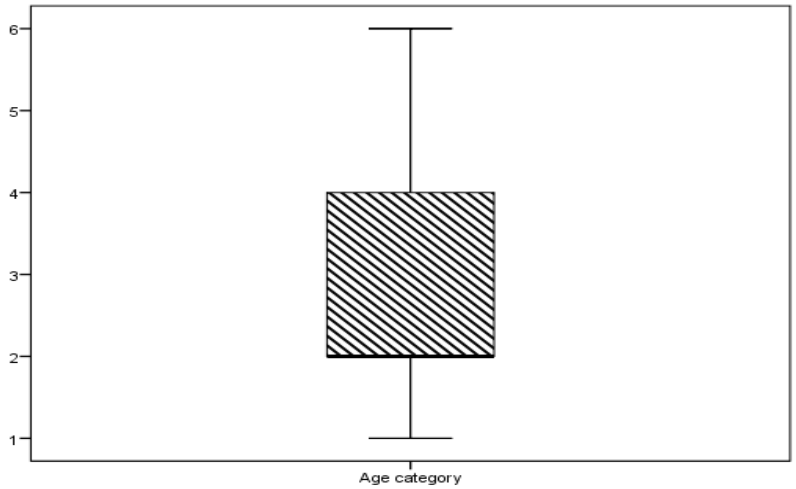
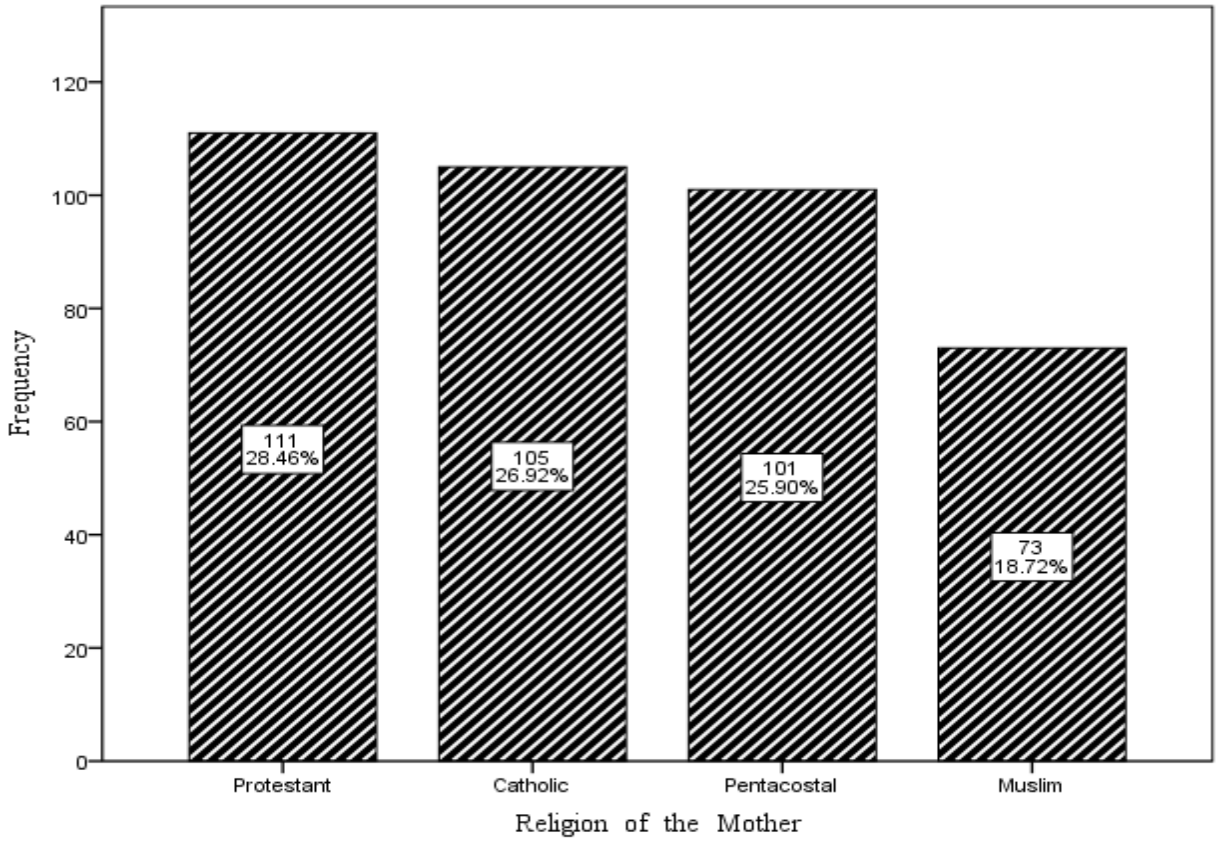


Figure 2: Figure one showing the median Age of mothers.

Figure 2: Above showed that the median age of mothers who participated in this study was 3(30-34) years' old mothers.

Figure 3: Distribution of respondents by Religion



As shown on the figure 3 above, most of the mothers were protestants, 111(28.46%), followed

by the catholic mothers, 105(26.92%), and Pentecostal 101(25.90%), and the least were Muslims.

4.1.2 Proportion of Mothers who attended all ANC visits

Figure 4: Proportion of Mothers who had attended all ANC schedules

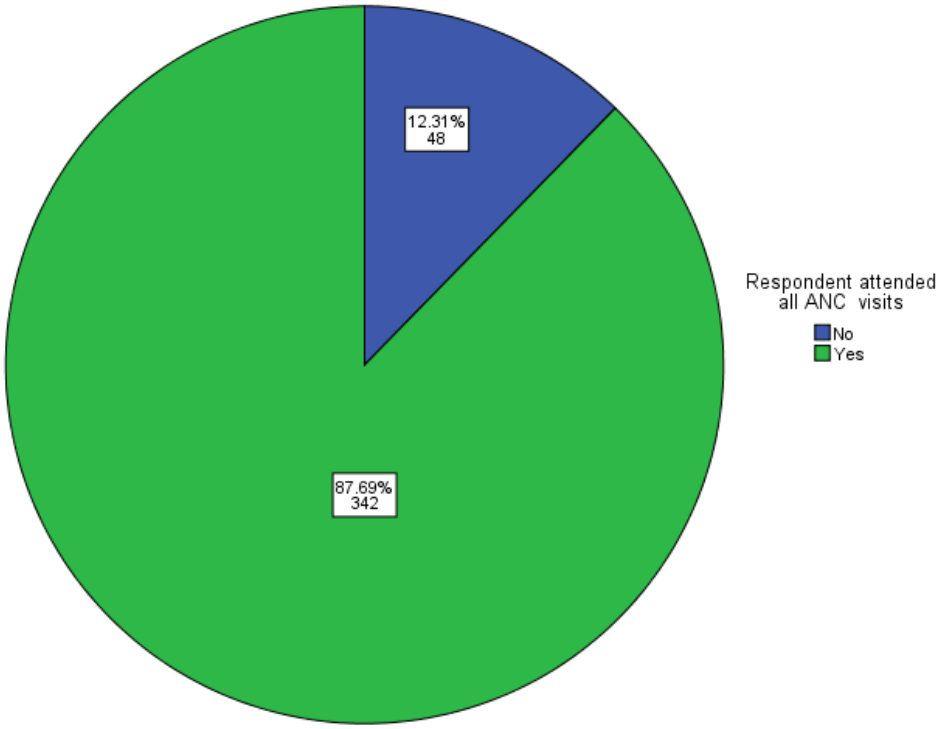


Figure 4 above showed that of the 390 samples takes, 342 (87.69 %) had attended all ANC services, 48 (12.31 %) had not attended at least one services in the last pregnancy.

4.1.3 Timing of ANC visits

Table 2: Timing of ANC visits

		Frequency	Percent	Cumulative Percent
Time of Fist ANC visit	1-3 Month	227	58.2	58.2
	4 - 6 Months	143	36.7	94.9
	After 7 Months	20	5.1	100.0
	Total	390	100.0	

Table 2: Above showed that most of the mothers attended ANC at 1-3 months of pregnancy, 227(58.2%) followed by those who were 4-6 months pregnant, 143(36.7%) and the lowest number of mothers 20(5.1%) attended ANC services at 7-9 months of pregnancy.

Table 3: Timing of ANC visit by Age

Timing of ANC attendance by Age groups

		Age category						
		20-24	25-29	30-34	35-39	40-44	45-49	Total
Timing of ANC attendance	1-3 Month	51	70	54	24	13	15	227
	4 - 6 Months	25	48	30	14	15	11	143
	After 7 Months	2	4	6	3	3	2	20
Total		78	122	90	41	31	28	390

Table 3: Above showed that most of the mothers aged 25-29 years attended ANC between 1-3 months (70) followed by the same age group at 4-6 months (48) and the least was the age group of 40-44 at 7-9 months (13).

Table 4: Early ANC attendance by Age

ANC timing by Age category

			Timing of ANC visits		
			Early	Late	Total
Age group	20-34	Count	175	115	290
		% within age	60.3%	39.7%	100.0%
		% within Timing of ANC visits	77.1%	70.6%	74.4%
		% of Total	44.9%	29.5%	74.4%
	35 and above	Count	52	48	100
		% within age	52.0%	48.0%	100.0%
		% within Timing of ANC visits	22.9%	29.4%	25.6%
		% of Total	13.3%	12.3%	25.6%
Total		Count	227	163	390
		% within age	58.2%	41.8%	100.0%
		% within Timing of ANC visits	100.0%	100.0%	100.0%
		% of Total	58.2%	41.8%	100.0%

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.129[a]	1	.145		
Continuity Correction[b]	1.799	1	.180		
Likelihood Ratio	2.114	1	.146		
Fisher's Exact Test				.159	.090
Linear-by-Linear Association	2.123	1	.145		
N of Valid Cases	390				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 41.79.

b. Computed only for a 2x2 table

A chi-square test of independence was performed to examine the relation between age categories and the timing of ANC visit. x^2 (1, N = 390) =2.1.29, p = .145. This tells us that there is no statistically significant association between age category and timing of first ANC visit ; that is, both mothers

less than 20- 34 and mothers 35 years and above equally prefer early ANC visits versus late ANC visits.

Table 5: Timing of ANC visits and Gravidity

			Timing of ANC visits		
			Early	Late	Total
GRAV	Prime Gravida	Count	96	49	145
		% within GRAV	66.2%	33.8%	100.0%
		% within Timing of ANC visits	42.3%	30.1%	37.2%
	Gravida two and above	Count	131	114	245
		% within GRAV	53.5%	46.5%	100.0%
		% within Timing of ANC visits	57.7%	69.9%	62.8%
Total		Count	227	163	390
		% within GRAV	58.2%	41.8%	100.0%
		% within Timing of ANC visits	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.075[a]	1	.014		
Continuity Correction[b]	5.563	1	.018		
Likelihood Ratio	6.143	1	.013		
Fisher's Exact Test				.015	.009
Linear-by-Linear Association	6.060	1	.014		
N of Valid Cases	390				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 60.60.

b. Computed only for a 2x2 table.

A chi-square test of independence was performed to examine the relation between gravidity and timing of ANC visits. The relation between these variables was significant, x^2 (1, N = 390) =6.075, p = <0.05. this showed that prime gravidas preferred to come early for ANC visits than the gravida two and above.

Table 6: Timing of ANC visit and Level of Mother education

Mothers level of formal education and timing of ANC visit

		Timing of ANC visits		
		Early	Late	Total
mothers level of education	No Education	56	28	84
	Primary Education	54	60	114
	Secondary Education	62	32	94
	Post-Secondary Education	55	43	98
Total		227	163	390

Table above showed that most of the mothers who reported for ANC early were educated to tertiary level of education 14 (60.8%), followed by those who had reached secondary level of education 20(62.5%) of the mothers who had reached secondary education. For those who reported after three months, 9(81.8%) of those who had no education and 15(51.7%) of those who had stopped at primary level of education.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.003[a]	1	.954		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.003	1	.954		
Fisher's Exact Test				1.000	.527
Linear-by-Linear Association	.003	1	.954		
N of Valid Cases	306				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 43.24.

b. Computed only for a 2x2 table.

A chi-square test of independence was performed to examine the relation between level of education and timing of ANC visit. The relation between these variables was not significant, x^2 (1, N = 390) = .003, p = .954. This showed that there is no statistically significant association between higher level of education and timing of first ANC visit ; that is, both mothers high education (secondary and post-secondary) and mothers with low education (no education and primary) equally reported early for their 1st ANC visits versus late ANC visits.

4.1.4 Reasons for Early visit to the ANC clinic

Table 7: Reasons for late and early coming

		How many times was this aspect mentioned	Percentage based on response	Percentage based on Answer
What was the reason for coming early for ANC visit? (tick more than 1 answer)	had a child before	106	46.7%	11.5%
	doctors and nurse were friendly	107	47.1%	11.6%
	got good experience previously	119	52.4%	12.9%
	wanted to get a file	129	56.8%	14.0%
	was near a clinic	114	50.2%	12.4%
	developed a problem	121	53.3%	13.1%
	thought was the right time	107	47.1%	11.6%
	was told to come	119	52.4%	12.9%
	Total	227	100.0%	100.0%

227 respondents have mentioned at least one aspect for coming early. Most response were from those who wanted to have an ANC file, 129 respondents indicated that wanting to have a file was the most important aspect for early ANC attendance. That is 56.8 % of all people who responded and it is 14.0 %% of all the answers given.

This was followed by: 119 respondents who mentioned that they had a previous good experience in the clinic. This was 52.4% of al the people who responded and it is 12.9% of all the answers given.

1.4.5 Place of Delivery

Figure 2: Place of delivery

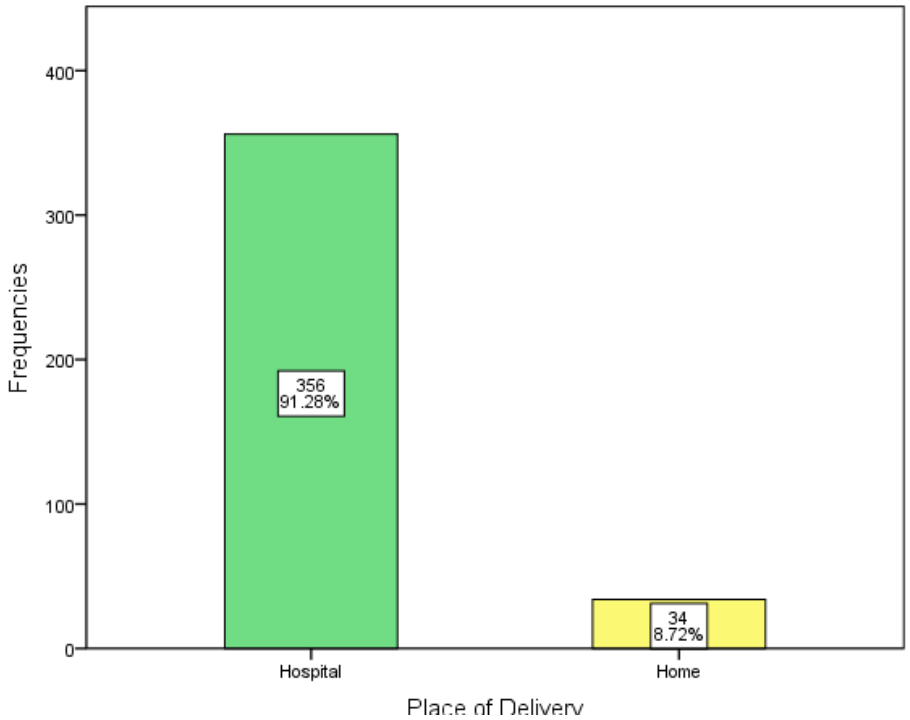


Figure 5: above showed that most of the mothers who attended ANC delivered from the hospitals, 89(93.68%) and 6(6.32%) of the mothers who attended ANC did not deliver in the hospital.

Timing of ANC visit and place of Delivery

			place of delivery		
			Hospital	Home	Total
Timing of ANC visits	Early	Count	209	18	227
		% within Timing of ANC visits	92.1%	7.9%	100.0%
		% within place of delivery	58.7%	52.9%	58.2%
	Late	Count	147	16	163
		% within Timing of ANC visits	90.2%	9.8%	100.0%
		% within place of delivery	41.3%	47.1%	41.8%
Total		Count	356	34	390
		% within Timing of ANC visits	91.3%	8.7%	100.0%
		% within place of delivery	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.424[a]	1	.515		
Continuity Correction[b]	.220	1	.639		
Likelihood Ratio	.421	1	.517		
Fisher's Exact Test				.586	.317
Linear-by-Linear Association	.423	1	.515		
N of Valid Cases	390				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 14.21.

b. Computed only for a 2x2 table

A chi square test of association to determine if timing of ANC visit were associated with the places of delivery were conducted. And the results showed that χ (1) = 0.434, p = .515. This tells us that there is no statistically significant association between timing of ANC visit and the places that the mothers choose to deliver from; that is, both mother who initiated ANC visits early and mothers who initiated ANC visits late equally prefer hospital delivery versus home delivery.

CHAPTER FIVE: DISCUSSIONS

5.0 General Introductions

In this chapter, the researcher made a presentation of the discussions of the study findings. In short, the research has described the study findings, meaning of the findings and reasons as to why those findings were that way and made impressions of those findings. These have been arranged according to the specific objectives. Conclusions and recommendations have been placed at the end of this chapter.

5.1 Discussion

Attendances and Timing of ANC services.

This study showed that 87.69 % of the mothers within the peri-urban areas of Kiryandongo town council attended all ANC services during their last pregnancies and 12.31% had attended at least one ANC services during pregnancy.

This showed the ANC attendance rate among women in the peri-urban setting of Kiryandongo town council in Kiryandongo district is higher than the national average of 60% attendance of all ANC visit recorded by the ministry of health in 2016. Routine screening during the first ANC visit is very critical in the care of a pregnant woman (WHO safe motherhood 1996). This is explained by the geographic location of the study area which was within a close distance to a district hospital. However, this study does not in any way justify that the attendance of ANC services in the whole district is better as it is observed that most of the mothers who had attended less ANC services were from different parts of the district.

The revelation from the finding is that most of the mothers who do not attend ANC services risk having difficulty in their pregnancy or experiencing complications associated with pregnancy including transmitting HIV infections to their children in case they are HIV positive.

These findings further showed that most of the mothers attended ANC at 1-3 months of pregnancy, representing 58.2 % as shown in table 3. According to the WHO ANC guidelines, a pregnant mother should attend the first ANC visit within the first three months of pregnancy.

Apparently this good result could be accounted to the work already being done by the community peers supported through the reproductive health implementing partners in the town council of Kiryandongo.

There are mothers who missed the mandatory 4 times ANC visits that are meant to be spread throughout the entire pregnancy period. Those underutilizing ANC services are usually shown to have complications. In this study, the researcher did not follow these mothers who underutilized ANC for any possible complications.

Factors for early Attendances of ANC

In this study, it came out that there is no significant relationship between age groups of the mothers and the timing of ANC visits. The observation of frequencies showed that both mothers less than 20- 34 and mothers 35 years and above equally prefer early ANC visits versus late ANC visits.

Our descriptive statistics showed that most of the mothers who reported for ANC early were educated to tertiary level of education 14 (60.8%), followed by those who had reached secondary level of education 20(62.5%) of the mothers who had reached secondary education. For those who reported after three months, 9(81.8%) of those who had no education and 15(51.7%) of those who had stopped at primary level of education.

However, when a test of independence was conducted using chi squared test. No significant finding was found, that is x^2 (1, N = 390) = .003, p = .954. This showed that there is no statistically significant association between higher level of education and timing of first ANC visit ; that is, both mothers high education (secondary and post-secondary) and mothers with low education (no education and primary) equally reported early for their 1st ANC visits versus late ANC visits.

Similar studies have been done in Vietnam (T. K. Tran et al., 2011) showed that in the rural area, 77.2% of women had at least three visits and 69.1% attended ANC during the first trimester. And in rural Kenya (Fotso, Ezeh, & Oronje, 2008) showed that despite the high prevalence of antenatal care (ANC), the proportion of women who made the recommended number of visits or who initiated the visit in the first trimester of pregnancy remains low

compared to Nairobi as a whole and, more importantly, compared to rural populations. Bivariate analysis showed that education, parity, and place of residence were closely associated with frequency and timing of ANC and with place of delivery. However, no significant associations were noted.

Early utilization of ANC services is pivotal in shaping the outcomes of pregnancy, Early ANC booking and regular follow-up of services usually provides opportunities for delivering health information and interventions (i.e., via early detection of modifiable preexisting medical conditions like Heart disease, Diabetes Mellitus, Hypertensive disorders, HIV/AIDS, and severe anemia) that can significantly enhance the health of the mother and fetus.

This study findings differed from those of done in Nigeria which showed that Agehas a significant association with use of ANC visits in women who were 25 years 245(79.0%)] were more likely to attend ANC clinic than women who were less than 25 years 62(68.9%).

And in terms of their education, 60.8% of early attendants were well educated to tertiary level and 81.8% of those who had no education reported late. (M.D Dairo et al, 2010) also had a similar findings where Educational status showed a significant association with respondents having an education of secondary school and above 275 (82.1%) attending ANC clinic more compared to women who had an education of primary school and below32 (50.0%).

This study showed that that most of the mothers who attended ANC within 1-3 months (early) thought it was the right time to attend ANC and those who developed problems in their pregnancy. This was similar with the finding of Frank Odhiambo et al, 2006 where mother gave reason for attending ANC as to detect maternal problems and to be treated when sick. This showed that most of the mothers attending ANC understood the role of ANC in minimizing risk during pregnancy.

Factors for inadequate attendance of ANC

According to the interactions of the researcher with some key informants, most of the mother shun coming to the hospitals because their partners fear to attend ANC with them. This is because most time, when partners come over to the clinic together, they are required to take an HIV test together. In the past two years, ministry of health survey showed that male involvement was still at 49% and has been steadily rising.

The researcher is convinced that failure to attend ANC among these mothers could be an indicator that most of the mothers still attend to traditional birth attendants or use complementary local medicines during their pregnancies.

Though there are no locally conducted researches about these issues within Kiryandongo. There is adequate evidence from other areas that most of the mothers who do not attend ANC services resort to local healers. For instance, study conducted by Anan and Jolly 2014 and published over the journal of obstetrics showed that up to 57.1% of pregnant women surveyed had used complementary and alternative methods during their last pregnancy.

In this study it was shown that up to 8.72 % of the mothers delivered from their homes (figure 5), besides the education that they were offered to during the ANC visit. What was leading to this trend was clearly not well understood in this study. But the researcher hypothesized that it could have been due to variations on mother and partners socio-demographic characteristics.

5.2 Conclusion

The study concluded that the utilization of ANC services in Kiryandongo town was fairly good as most women (15-49) age group attended ANC clinics, however this was well observed in early ANC attendances as opposed to the late. Therefore there is need for more sensitization of the mothers about the goodness of ANC services.

5.3 Recommendation

This study recommended that:

1. The community leaders within Kiryandongo town council should mobilize the local communities especially mothers of reproductive age to utilize the ANC services from a formal health center or hospital.
2. The providers of ANC services should create awareness of the good services they provde to increase demands for ANC services among women of reproductive age in the Town council.
3. Another study of a similar setting with a larger scope should be undertaken to determine the factors causing late attendance of ANC among women of reproductive age at Kiryandongo Town, and follow up the complication associated to mothers attending less ANC services.

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APPENDICES

Appendix 1: Data collection tool.

RESEARCH TOPIC: THE UTILISATION OF ANTENATAL CARE SERVICESBY WOMEN OF REPRODUCTIVE AGES (15-49) AT KIRYANDONGO SUB COUNTY, KIRYANDONGO DISTRICT, WESTRN UGANDA

SELF ADMNISTERED QUESTIONAIRE

Date:…….Place of Interview……..

Introduction

Purpose of the questionnaire: This questionnaire is developed as a data collection tool to be filed in by selected respondents. The data obtained from which shall be used only for research purposes in partial fulfillment of the award of Bachelor of Medicine and Bachelor of Surgery of Kampala International University Teaching Hospital. The investigator requests your participation in the capacity of a resource person basing on your experience in the subject of study.

This data will be treated with the utmost confidentiality it deserves and will not be released to anyone/organization except for an academic purpose.

Section A: Bio data

Socio-demographic characteristics of the respondents

1. Age groups

15–19 ☐

20–24 ☐

25–29 ☐

30–34 ☐

35–39 ☐

40–44 ☐

45-49 ☐

2. Religion

   Catholic ☐

   Protestant ☐

   Muslim ☐

   Pentecostal ☐

   SDA ☐

3. Level of education of the mother

   No education ☐

   Secondary ☐

   Tertiary ☐

4. Level of education of the partner

   No education ☐

   Primary ☐

   Secondary ☐

   Tertiary ☐

   I don't know ☐

5. Occupation of the Mother

   House wife ☐

   Peasant ☐

   Business/Entrepreneur ☐

   Salaried/Waged ☐

   Student ☐

6. Occupation of the partner

   Not employed ☐

   Peasant ☐

   Business/Entrepreneur ☐

   Salaried/Waged ☐

   Student ☐

7. Marital status of the mother

Married ☐

Single ☐

Widower ☐

Separated ☐

Obstetric history of the study participants

1. Date of last normal menstruate period (LNMP) (If currently pregnant)

Not sure of date ☐

Sure of date ☐

2. How old is the pregnancy? (If currently pregnant)

20-28 ☐

29-36 ☐

Greater than 36 ☐

3. Gravidity

Prime gravida ☐

Multi gravida ☐

Grand multi gravida ☐

4. History of abortion

Yes ☐

No ☐

5. Number of abortions

   One ☐

   Two ☐

   Three ☐

   Four ☐

   Five ☐

   Six ☐

   Seven ☐

6. Where did you deliver from?

   Home ☐

   Hospital ☐

7. Timing of ANC visit

   At what week of pregnancy did you visit the ANC clinic?

   …….

8. Reason for going early to the ANC clinic (Tick all that apply).

   Developed a problem ☐

   Was near to the clinic ☐

   Wants to get a file ☐

   Was told to come ☐

   I had children before ☐

   Doctors and nurses were friendly ☐

   Got good experience in the past pregnancies ☐

   Thought this was the right time to come ☐

   Others specify…….

Thanks for your time

Appendix 11: Consent Form

Introduction: I am Achayo Agnes Okello, a student of Kampala international university. I am conducting a study to determine the utilization of ANC care services by women within the peri-urban area of Kiryandongo Sub county; from Kampala International University Teaching Hospital.

I would wish to request for your voluntary participation to take part in this study. All the information gathered from this study will be treated with utmost confidentiality, and the records obtained shall be used for research purpose only. During the course of this study, you will be free to withdraw at any point, if you do not feel comfortable.

Please sign in the space provided below if you agree to take part in this study.

Thank you.

Signature of the respondent .....dates.....

Appendix I11: Work Plan

Table 8: Research Work plan and timeline of Activities

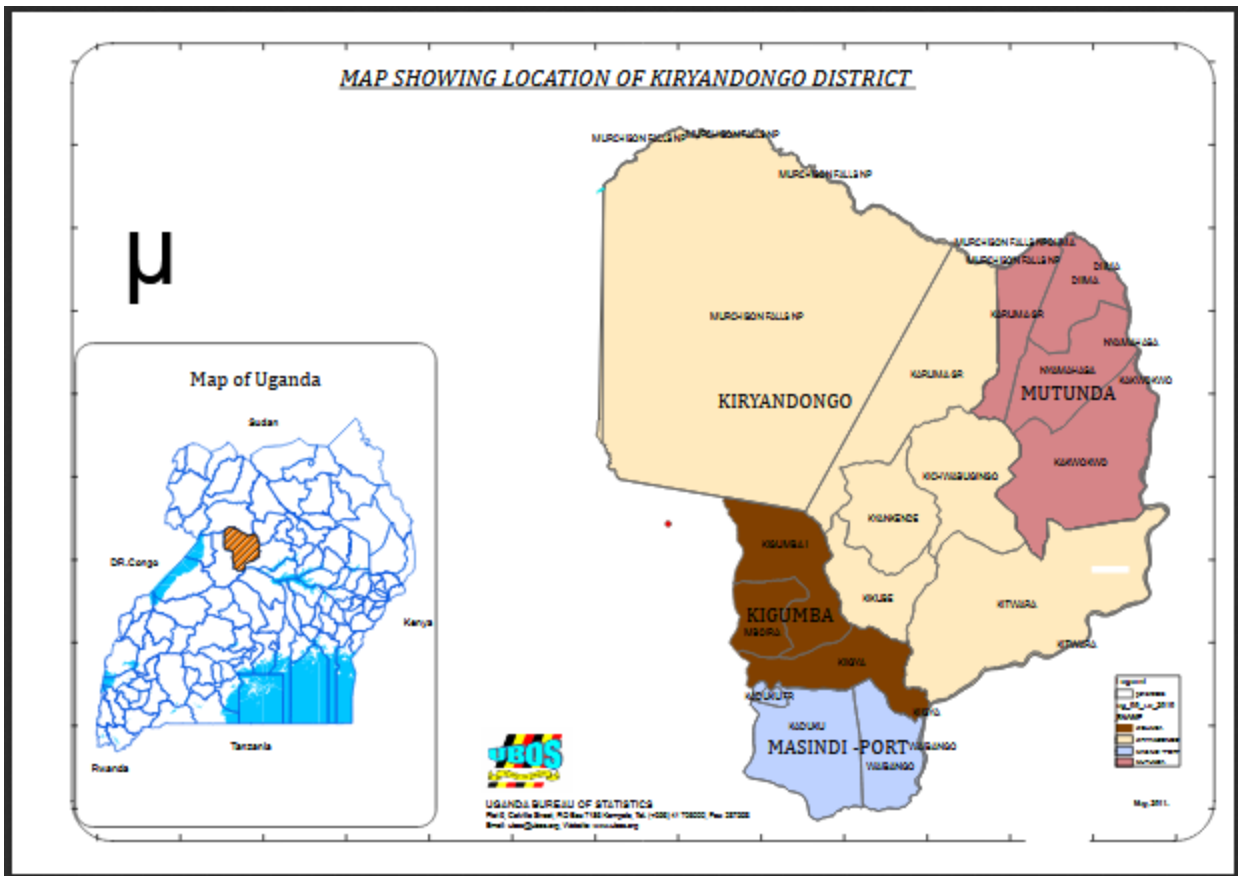
Time →Activity↓	2017 Oct Nov Dec			2018 Jan Feb March		
Proposal Writing						
Approval						
Data Collection						
Analysis and Discussion						
1st Draft Report						
Correction of first draft						
Submission of Final Report						

Appendix: IV Research Budget

Table 9: Research Budget and justifications

	Activity(s)	Description / Justification	Responsible person	Unit cost	No.	Total Cost (Ugshs)
1	**Pre Report development**					
	Laptop	Personal laptop will ease literature review, report development, data collection and report writing	Principle researcher	**1,300,000/=**	1	**1,300,000/=**
	Purchase of Internet Modem	Internet Modem will be purchased to ease the literature search, data collection and report writing	Principle researcher	**110,000/=**	1	**110,000/=**
2	**Report development**					
	Typing and printing	Report will be developed to guide the study	Principle researcher	**50,000/=**	2	**60,000/=**
	Internet bundles	Will be required during Literature review	Principle researcher	**100,000/=**		**100,000/=**
3	**Data collection**					
	Transport	Transport to and fro the district	Principle researcher	**60,000/=**	4	**240,000/=**
4	**Data analysis**					
	Statistical analysis			**300,000/=**	1	**200,000/=**
5	**Report writing**					
	Typing and printing	Four copies of the report made	Principle researcher	**110,000/=**	4	**150,000/=**
	Total					**2,310,000**

Appendix V: Map of Kiryandongo district.



Appendix VI: Introductory Letter

KAMPALA INTERNATIONAL UNIVERSITY – WESTERN CAMPUS
EXPLORING THE HEIGHTS

P O BOX 71, ISHAKA UGANDA
Tel: +256 200923534
www.kiu.ac.ug

OFFICE OF THE DEAN
FACULTY OF CLINICAL MEDICINE & DENTISTRY

01/03/2018

TO WHOM IT MAY CONCERN

Bms/0060/132/DU

RE: ACHAYO AGNES OKELLO (~~BMS/006/122~~/DU)

The above named person is a fifth year student at Kampala International University pursuing a Bachelor of Medicine, Bachelor of Surgery (MBChB) Programme.

She wishes to conduct her student research in your community.

Topic: Utilization of antenatal care in Kiryandongo ~~hospital~~ district.

Supervisor: Dr.Okello Bosco Ottu

Any assistance given will be appreciated.

S-O. Akib

Dr. Akib Surat O
Assoc Dean FCM&D

K.I.U TEACHING HOSPITAL
01 MAR 2018
W.Campus
DEDI/ASSOCIATE DEAN FCM&D

Appendix VII: Recommendation Letter

KAMPALA INTERNATIONAL UNIVERSITY (WC)
P.O BOX 71,
ISHAKA BUSHENYI MUNICIPALITY,
BUSHENYI DISTRICT,
26/03/2018.

Permission granted
26/03/2018

FOR CHIEF ADMINISTRATIVE OFFICER
26 MAR 2018
P.O. BOX 137
KIRYANDONGO
KIRYANDONGO DISTRICT LOCAL GOVERNMENT

THE CHIEF ADMINISTRATION OFFICER,
KIDYANDONGO DISTRICT.

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH;

I humbly request for permission to conduct research in Kiryandongo District. I am Achayo Agnes Okello a fifth year medical student in Kampala International University pursuing bachelor of Medicine, Bachelor of surgery. I have been attached to Kiryandongo Hospital by the University since 12/ 10/ 2017 for clinical practice, knowledge and skills acquisition. I am interested in finding out how antenatal clinic services are utilized by women of reproductive age in Kiryandongo District.

Thanks for your consideration.

Yours faithful

Achayo

ACHAYO AGNES OKELLO

Attached are the copies of;

The introduction letter and the questionnaire.